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HIGHWAY SIMPLIFICATION STUDY FINAL REPORT

*Recommendations to Achieve Simplicity,
Accountability, Fairness, Efficiency,
and Smoother Roads*

Presented to the
Joint Standing Committee on Transportation

Pursuant to P.L. 2009, Chapter 413, Sec. T-1

January 2011



MaineDOT

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION
AUGUSTA, MAINE
04333-0016

January 25, 2011

Honorable Ronald Collins, Senate Chair
Honorable Richard Cebra, House Chair
Joint Standing Committee on Transportation
SHS 15
Augusta, ME 04333-0015

Re: Highway Simplification Study – Final Report

Dear Senator Collins, Representative Cebra, Members of the Transportation Committee:

As directed by P.L. 2009, Chapter 413, Sec. T-1, and in accordance with time extensions granted by the Chairs, the Maine Department of Transportation (MaineDOT), having worked in cooperation with stakeholders designated by law, hereby submits this report on the “highway system classification simplification study”, also known as the “Highway Simplification Study”, or the “Study” herein.

As you know, the Study was directed by members of the 124th Legislature and performed by the MaineDOT under the former administration. Accordingly, this report cannot and should not be considered the work product of the LePage administration. If and when the Transportation Committee of the 125th Legislature holds public hearings or directs further work in furtherance of the Study, the LePage administration will provide policy input at that time.

As will be demonstrated below, the Study topics and potential results are both huge. If the Study recommendations proceed to legislation, funding, and implementation, it would represent the most fundamental change in highway policy in over 100 years. It would eventually affect every town and benefit every traveler. Simply put, this is a potential game changer.

Given funding constraints, it is acknowledged that moving forward with the recommendations in this report will be challenging. However, the team of dedicated professionals that worked on this Study sincerely hopes that the partnership between MaineDOT, municipalities, and other stakeholders that was forged as part of this process can be transformed into tangible results. We look forward to working with you toward that end.

Respectfully submitted,



Bruce A. Van Note
Deputy Commissioner

Highway Simplification Study

Table of Contents

Executive Summary	1
1. Purpose of and Need for Study.....	8
2. Overview of Maine’s Highway System.....	10
3. Study Team and Process.....	14
4. Policy Goals and Political Realities.....	17
5. Findings and Conclusions.....	19
6. Recommendations.....	22
<u>Major Recommendation #1</u> : Migrate to a Federal Functional Classification Based System as the Sole Classification System in Maine by Using a “Fix, Swap and Help Fund” Strategy	22
<u>Major Recommendation #2</u> : Redefine Compact Areas and Related Responsibilities to be More Fair and Efficient	29
<u>Major Recommendation #3</u> : Revise Local Road Assistance Funding to be More Fair and Predictable	32
Procedural Recommendations:	35
Limit Reclassification of Roads	
Create an Appeals Committee	
Require Program Review Every Four Years	
Political Viability of Recommendations	35
7. Another Policy Alternative.....	37
8. The Road Ahead.....	38
APPENDICES	
Appendix A - The Legislative Directive: P.L. 2009, Chapter 413, Sec. T-1	40
Appendix B - Minor Collector Highway Improvement (MiCHIP) Standard	42
Appendix C - MiCHIP Capital Cost Estimate	46
Appendix D - Municipalities Meeting the Proposed Compact Definition	47
Appendix E - Compact Area Responsibilities	50
Appendix F - Ongoing MiCHIP Funding Program Calculation	52
Appendix G - Miles and Local Road Assistance Funding Spreadsheet (Handout)	53

Executive Summary

This section summarizes the Study process, major findings and recommendations.

Study Process:

Extensive Municipal Involvement and Consensus

Working in a collaborative, open manner for over a year, the municipal community was fully represented and heard. The Study team consisted of a 15-member Policy Working Group (PWG) and two subcommittees. Municipal officials with centuries of combined experience formed almost $\frac{3}{4}$ of the membership on these groups (27 of 37 members). In fact, MaineDOT used many of “its” slots on committees to augment geographic and urban / rural balance of municipal officials.

Thirty-five (35) meetings totaling about 120 hours were held over the course of a year. An estimated 32,000 miles were logged to attend these meetings. Town managers, public works directors, engineers, and MaineDOT representatives all sat down, rolled up their sleeves, and worked to solve problems. In addition, three open “Sounding Board” meetings with attendance of 50, 75, and 102 were hosted by the Maine Municipal Association (MMA). Kate Dufour of MMA staff took the minutes of the PWG, helped create agendas, and often helped keep the effort on track. Articles appeared in the “Maine Townsman” and a briefing was held at the MMA convention in October. The 70 member Legislative Policy Committee (LPC) of MMA also held a brief, closed door session on the preliminary Study results. All of that input shaped the recommendations in this Study. Like any policy process, substantial compromises were made to reach agreement.

Given the scope and importance of the task, the level of consensus reached by the Study team was impressive. Almost all the substantive recommendations contained in this report had unanimous, or near unanimous support of the PWG. Sometimes support was conditioned upon reliable long-term funding, but the underlying support for the policy remained. At the conclusion of the PWG process, there was only one significant outstanding policy issue, and it is addressed in this final report. In sum, this report represents an impressive amount of work and consensus.

Of course, with almost 500 municipalities in Maine, even an extensive and open process does not mean that all municipalities will be happy. In fact, the Study process itself demonstrated that some municipal officials will be passionately against some of the Study recommendations. Many local officials are wary of any state initiative; they simply “don’t trust Augusta”. Simply put, the external context made this a tough time to do any major study.

Aware of these barriers, much effort was made to make this Study a joint initiative. The effort was worthwhile. Though topics often caused heated discussion, the dialog between Study team members was friendly and productive. Mutual respect and trust between Study team members was evident. In the end, all municipalities had ample opportunity to be heard, and input received was carefully considered. Significant and costly changes to proposals were made.

In sum, although further education and outreach is always worthwhile, it appears unlikely that more process would yield significantly different policy recommendations.

Major Findings

Having Two Highway Classification Systems Causes Confusion and Poor Customer Service

There are two completely different highway classification systems in Maine. The Federal Functional Classification (FFC) system classifies highways using intuitive terms like Interstate, Arterials, Major Collectors, Minor Collectors, and Local. This system determines federal funding eligibility and whether a complex array of federal rules applies, among other things. Obviously, the federal system is required throughout the country and is not going away. As its name implies, the FFC system classifies roads based upon their function, and balances the mobility function (i.e. through traffic) with the local land access function. Simply put, the FFC focuses on how the road works, and is therefore the most relevant to maintenance and operations.

On the state level, there exists the state jurisdictional classification system that divides highways into “state highways, state aid highways and town ways”. It is used, among other things, to determine maintenance responsibilities and the nature and amount of local road assistance funding. The system has its origin over 100 years ago, and is laden with history. For example, the term “*state aid*” describes the old process of the *state* providing municipalities with financial *aid* for local roads so Maine towns could “get out of the mud” to facilitate widespread automobile use. Before then, almost all roads were the full responsibility of the county, municipality, or other local government entity (example – proprietors). Simply put, the state classification system focuses more on the history of a road, and somewhat less on its function. Therefore, this system is not as operationally relevant as the FFC system.

Under the current “state aid system”, the State and municipalities share road responsibilities for “state aid” roads depending upon the season and the type of work. Generally speaking, municipalities provide winter maintenance, the state provides summer maintenance, and the state and municipalities share capital responsibility. Capital responsibility is shared on a 2/3 state, 1/3 municipal basis through the Rural Road Initiative (RRI) program, if funding permits. Given that RRI funding remains very limited, “improvement” of these roads is often limited to the State performing a thin paving overlay now known as “Light Capital Paving”, formerly known as Maintenance Surface Treatment (MST) or “skinny-mix”. When problems arise on these roads, the line between maintenance and capital work can be a hot topic of discussion between the municipality and the State. The Study found that the split responsibilities on these roads have led to unclear roles, operational inefficiencies, lack of accountability, and neglected roads. An old adage seems especially appropriate. “*When everyone is responsible, no one is*”.

Current Compact Definitions and Funding Leads to Operational Inefficiency and Inequality

The current state law definitions of urban compacts and winter compacts are confusing and treat similar compact areas differently. For example, under current law, Gardiner and Lisbon have year round maintenance responsibilities of all state roads in the compact areas,

while Camden and Ellsworth have winter responsibilities only, and Gray and Hampden have none. All have public works staff and the ability to do the work. The reason for the disparity in treatment is largely historical and population based.

Major Recommendations

In general terms, if the vision embodied in this Study is achieved, the partnership between the state and municipalities would be strengthened, roles and responsibilities made clear, accountability increased, operational efficiency and flexibility enhanced, local control strengthened, and customer service improved. This vision would result from implementation of the proposals in this Study, including three major recommendations.

#1: Migrate to a Federal Functional Classification Based System as the Sole Classification System Using a “Fix, Swap and Help Fund” Strategy

The State should gradually migrate to a Federal Functional Classification based system as the sole highway classification system in Maine. Accordingly, we should phase out the state jurisdictional classification system. It took us over 100 years to get to the complicated place in which we find ourselves, and it will take some time to unwind it. To do so in a fair, gradual, and predictable way, the Study recommends a Fix, Swap and Help Fund strategy.

Fix. Over an estimated 12 year period, improve about 4,954 lane miles of Minor Collector roads – some of Maine’s worst roads located in every corner of the state - to an agreed-upon design standard at 100% state expense. This one-time state fix would become known as the Minor Collector Highway Improvement Program, or MiCHIP.

The cost of this capital program will be substantial, but reasonable on a per mile basis. The Study team agreed upon a new, lower-cost design standard with an estimated useful life of 10 years, to be known as the MiCHIP standard. See Appendix B. The estimated unit cost of a MiCHIP project is \$65,000 per lane mile of rural road (in today’s dollars). This is substantially more than the \$21,000 per lane mile estimated cost of the State’s Light Capital Paving (a.k.a. MST). It is much less than the cost of full reconstruction, which generally ranges from \$375,000 to \$500,000 per lane mile. Unit costs in compact areas will be higher, but compact mileage represents only about 14% of the Minor Collector inventory.

Due to the large number of Minor Collector road miles statewide, the Study estimates an annual capital funding need of a 12 year MiCHIP program will start at \$35 million in year 1, and increase to about \$45 million by year 12, assuming construction inflation averages 2 ½ percent per year. This yields an estimated total 12 year MiCHIP capital need of about \$482 million. See Appendix C. This need would be offset by a reduced demand in MaineDOT’s Light Capital Paving (aka MST) program, because about 400 lane miles of these Minor Collector roads would be treated under the MiCHIP program, and would not require Light Capital Paving. The total 12 year estimate of the Light Capital offset is \$119 million, which yields a net capital need of \$363 million.

Swap. On the initial July 1st after all the Minor Collector roads in a municipality have been improved, road responsibilities would be swapped. (This means the State has to deliver on the capital funding and project delivery before responsibilities shift. This was viewed as an important safeguard to municipal Study participants.) It is important to emphasize that this is not a one-way turn back of roads; it is a swap. How the swap will impact each municipality will depend upon its road inventory – whether it has all Major Collector highways, all Minor Collector roads, a combination of both, or neither. Statewide, the state would become responsible for plowing about 3,157 lane miles of roads now plowed by municipalities, the rural state aid Major Collector highways. Municipalities would become responsible for summer maintenance and have primary capital responsibility for about 4,954 lane miles of newly improved Minor Collector roads. Local Road Assistance funding will increase upon the swap. See recommendation #3 below.

Help Fund. The only significant outstanding policy issue at the conclusion of the PWG process was the responsibility for long-term capital needs of Minor Collector roads after the one-time State MiCHIP fix. In an attempt to resolve this issue, MaineDOT now proposes an on-going funding program aimed at equally sharing the on-going cost of Light Capital Paving, to be known as the MiCHIP Funding Program. It would be implemented on a first come, first-serve basis, have an overall program cap, and a per mile cap for municipalities. This program would come into existence only after the MiCHIP capital improvement program has been completed – about 12 years from the start of implementation. This existence of this funding alternative would not alter local control or responsibility for standards, level of service, contracting, etc. Municipalities will be the owner. In this respect, the State will be acting more like a home equity line of credit lender, not a co-owner. It is estimated that the cost of the ongoing MiCHIP Funding Program initially will be about \$10 million per year, assuming 2.5% construction inflation per year.

#2: Redefine Compact Areas and Related Responsibilities to be More Fair and Efficient

By revising how “compacts” and related responsibilities are defined, there is an opportunity to simplify, increase equity between municipalities with similar compact areas, match operational skills with the nature of the road, increase operational efficiency, heighten accountability, and enhance customer service. Simply put, municipalities are more sensitive to compact areas - and the businesses in them - than the State can be. The State’s focus is on through travelers.

To reach these policy goals, it is recommended that state law be changed to redefine a “Compact” to be an area that has at least 2.5 centerline miles of contiguous built-up development on Arterial and Major Collector highways. The current definitions of urban compacts and winter compacts should be eliminated. The nature and size of the built up area will be the primary factor of whether an area is designated compact, because it is simple and the most relevant to operations.

Applying this proposed definition, MaineDOT estimates that there are 75 such municipalities. To address concerns that municipalities with lower populations may not have the operational, administrative or financial capability to assume Compact maintenance

responsibilities, it is recommended that all municipalities with a population less than 4,000 be allowed to “opt out” of being treated as a Compact. With such a provision, 12 municipalities can opt out and 63 municipalities will be required to be Compact. See Appendix D.

To further enhance the equity between municipalities, it is recommended that any municipality and MaineDOT can agree that the municipality “opt in” as a Compact as well. In the past, some representatives of rural towns have argued that the URIP per mile rates paid to compact municipalities is high relative to rural towns. This will put all municipalities on a level playing field. If a municipality can do the work and believe the rates are a good deal, they can opt in with MaineDOT approval.

Once a municipality meets the 2.5 mile statutory threshold, MaineDOT and the municipalities will be encouraged to discuss and set the actual, on-the-ground Compact limits to maximize overall governmental operational efficiency. Changes to the statutory Compact boundaries will be by mutual agreement and based upon operational efficiency. Disputes can be referred to the Appeals Board mentioned below.

Within newly defined Compacts, it is generally more efficient for the municipality to provide year round maintenance for all roads within the Compact area, including Arterial and Major Collector highways that are a state responsibility. Year round maintenance in Compact areas includes controlling snow and ice, plowing sidewalks, removing snow, enacting parking bans, cleaning catch basins, replacing culverts, patching potholes, but does not include paving. Waivers of specific compact tasks may be granted if the municipality can demonstrate that it does not have the operational, administrative or financial capability to perform that task. Disputes can eventually go to the Appeal Committee for resolution.

#3: Revise Local Road Assistance Funding to be More Fair and Predictable

To make any simplified system work, the state financial assistance provided under the current Urban Rural Initiative Program (URIP), 23 M.R.S.A. §1803-B, et. seq., needs to be revised. This Study recommends repealing the current complex URIP funding formula and replacing it with a simpler and predictable Local Road Assistance program.

In any broad-based policy initiative, the acid test comes at the spreadsheet phase. A spreadsheet depicting the fiscal impact of the Study recommendation after full implementation (year 13) is included as Appendix G. As proposed, after full implementation of the “Fix and Swap” strategy (year 12), total annual state Local Road Assistance payments to municipalities would increase from the \$23 million in FY2010 to about \$36 million, an increase of about \$13 million or 58%. Further, almost 80% of all municipalities will receive more funding under the revised proposal. Approximately 20% of municipalities will eventually and gradually receive less due to the phasing out of the “hold harmless” provision included in the 1999 URIP law change. This means even those municipalities will not see the full reduction shown on the spreadsheet for at least four years.

Generally speaking, all municipalities will receive the same amount of state assistance for each lane mile of Local and Minor Collector road. It is important to understand that these rates are in no way intended to compensate the municipality for the total costs associated with its

roads. This proposed system of Local Road Assistance is just that – assistance for Local roads. At its essence, it is municipal revenue sharing of the State Highway Fund.

This Study recommends maintaining the current rate for Local roads of \$300 per lane mile for seasonal Local roads and \$600 per lane mile for year-round Local roads, and extending it to all Local roads. Similarly, all PWG members supported a \$1,200 per lane mile rate for Minor Collector roads. Additionally, after much discussion, it was agreed that with respect to municipalities that have more Minor Collector roads than state aid Major Collector highways, the state will pay an additional stipend rate for each excess mile. The proposed stipend rate is \$2,240 per lane mile, such that when it is added to the \$1,200 Minor Collector base rate, the total Minor Collector rate in those municipalities will be \$3,440, the average cost of summer maintenance according to the cost survey performed by this Study.

Analytically separate from the “revenue sharing” rates for Local and Minor Collector roads is the “Fee for Service” reimbursement for the marginal cost of year round maintenance work performed by municipalities on Arterial and Major Collector highways in compact areas. This rate was set at \$4,000, comparable to the current URIP rate.

In summary, proposed new Local Road Assistance Rates would be as follows.

<u>Classification</u>	<u>Rate per LM</u>
Local – Seasonal	\$ 300
Local- Year round	\$ 600
Minor Collector-Base Rate	\$1,200
Minor Collector-Stipend	\$2,240
Fee for Service-Compact	\$4,000

The proposed new Local Road Assistance program would have at least three more important elements. First, the current methodology of tying URIP payments to MaineDOT’s Highway Fund budget would be repealed. In its place, rates will be reviewed every four years as part of the recommended program reviews. Second, the current statutory requirement in the URIP law that requires municipalities use state URIP funding for capital purposes would also be repealed, meaning towns could use it for any constitutionally allowed highway related purpose, including plowing. This obviously provides more flexibility for municipalities. Lastly, Maine statute would provide that motor vehicle excise tax revenue collected by municipalities be used only for highway-related purposes including maintenance or capital costs of highways, minor spans, transit support, and traffic enforcement. This will demonstrate the partnership between the state and municipalities in our joint endeavor of using highway-related revenues to maintain our highway system.

The Road Ahead

If implemented, there are very significant financial and other benefits to municipalities. They include the \$482 capital investment for the MiCHIP program over the next 12 years, better Minor Collector Roads, the on-going MiCHIP Funding program starting thereafter estimated at \$10 million per year, and the proposed 58% increase in Local Road Assistance estimated at \$13 million per year. Operationally, clearer roles and accountability will lead to quicker local

decisions and efficiency. Of course, there are costs too. Summer maintenance and primary capital responsibility for Minor Collector roads will return to municipalities.

As of the date of this report, the position of the Maine Municipal Association remains unclear. The last “official” action was the LPC rejection of the prior “Fix and Swap” proposal and a counterproposal that was much more costly to the State. (Note that MMA and other stakeholders have not yet considered all the recommendations contained in this report including the ongoing MiCHIP Funding program.) There are several reasons for municipal trepidation. Many municipal officials remain wary of any policy proposal initiated at a state level, even those formulated with their extensive involvement. Some are simply looking for more state funding.

On the other hand, some non-municipal stakeholders have reasonably expressed concern that the level of funding proposed in this report is unrealistically high given State funding shortfalls, limited user benefits regarding Minor Collector roads, and higher priority needs statewide.

Whether any fiscally realistic proposal can be accepted by the municipal community remains an outstanding policy question.

Looking forward, as detailed as this report may appear to be, more work remains to achieve the “game changer” vision outlined herein. Such work includes review by the LePage Administration, the Transportation Committee, further municipal education, legislative drafting, full legislative debate, and ultimately a change in state law.

Again, however, this Study has the potential to be the most fundamental change in highway policy in over 100 years. It would reshape and strengthen the partnership between the State and municipalities and to launch a new spirit of cooperation. It would achieve simplicity, accountability, fairness, efficiency, and smoother roads. Subject to policy guidance from the Governor, MaineDOT stands willing and able to coordinate this additional work, if that is the pleasure of the Committee.

1. Purpose of and Need for Study

As part of its deliberations on the FY10-FY11 Highway Fund budget passed by the First Regular Session of the 124th Maine Legislature, the Transportation Committee considered the following legislative findings before ordering this Study. These findings outline its purpose and need.

- a) The current systems for classification of the approximately 23,000 centerline miles of public highways in Maine, and the related roles and responsibilities of different levels of government, are often complex, redundant, and confusing.
- b) There exists a federal functional classification system that determines the function served by the road and eligibility for federal funding. Classifications in this system include “interstate, arterials, major collectors, minor collectors, and local.” Over 80% of the vehicle miles travelled statewide occurs on the approximately 6,200 miles of highways that are federally classified as major collectors or higher.
- c) There also exists a separate state jurisdictional classification system that classifies roads as state highways, state aid highways, and town ways. This classification, in part, determines what level of government is responsible for winter maintenance, summer maintenance, and capital improvements.
- d) There are also separate definitions applicable to urban areas: state urban compacts, state winter compacts, federal urbanized areas, and federal Metropolitan Planning Organization areas. A given municipality may have two or more different urban boundaries or a municipality may qualify as “urban” under one set of criteria but not the other. Associated responsibilities for highway capital and maintenance are frequently unclear and confusing.
- e) Consequently, these classification systems often cause inefficient or ineffective infrastructure decisions, poor customer service, and costs shifts between levels of government. For instance, the State may not pave a road for which a municipality has winter maintenance responsibility, causing deeper wheel ruts, resulting in additional municipal costs for extra plowing and salting to clear the ice in the ruts. On the other hand, a municipality may decide to use sand in the winter, causing the ditches to fill with sand, resulting in additional state costs due to accelerated pavement damage, ditching needs, or worse, a complete rebuild due to a spring blow out caused by clogged culverts.
- f) Route numbering is unclear and redundant, with some state numbered routes being primarily a local responsibility, and some unnumbered routes being primarily a state responsibility. Travelers are justifiably confused when navigating or considering whom to contact with a concern.
- g) Municipalities report that they can repair and maintain roads for lower unit costs than the State by, among other things, applying their own design and work standards.
- h) The State is generally in a better position to satisfy the complex Federal standards and processes that are associated with federal funding.

- i) In general, the state should be responsible for roads with state and regional significance and bridges, and local governments should be responsible for roads of local significance and related minor spans.
- j) Lagging Highway Fund revenue and increased cost of construction mean that highway related funding will be inadequate to meet documented needs for years to come. For example, the proposed capital cash portion of the proposed state highway fund budget is nearing zero. Local governments will continue to need state financial assistance to take care of their highway related responsibilities.
- k) State and local governments need to work together to design and implement a highway system with related responsibilities that generally results in the most overall benefit to the most travelers for each dollar spent.
- l) The current systems of classification, related responsibilities, and funding are unsustainable. Change appears needed. Any such changes need to be designed and implemented in a fair, open, predictable, and gradual manner over time so as to minimize traveler disruption and budget impacts.

For these reasons, the 124th Maine Legislature charged MaineDOT with working with stakeholders to review the current systems for classification of public highways and related responsibilities to determine whether they should be simplified in ways to improve service to customers (highway system users), increase operational efficiencies, improve investment decisions, apply standards appropriate to the road, leverage the ability to deliver improvements at a lower cost, and result in the most overall benefit to the most travelers for each dollar spent. A report back to the Transportation Committee was ordered, and through extensions granted by the Chairs aimed primarily at working fully with the municipal community, the deadline was extended to January 25, 2011. For the complete text of the legislative directive to perform the study, see P.L. 2009, Chapter 413, Part T, copy attached as Appendix A.

2. Overview of Maine's Highway System

Maine's highway and bridge system is the backbone of the Maine economy. It is critical to all Maine businesses and citizens. The vast majority of people and goods in Maine are moved over 23,000 centerline miles of public roads. There are also about 50,000 or more miles of private roads, most of which are owned and maintained by timber-related companies. (Private roads are not the subject of this Study.) Other entities also have a role. The Maine Turnpike Authority is responsible for the 243 miles of Turnpike, and 323 miles of highways are maintained by other State and federal agencies. About 87% of all freight is currently moved on the highway and bridge system, up from 65% in 1982. Given its importance, the highway and bridge system represents the vast majority of transportation expenditures in Maine – about 90%.

A brief note about units of road measurement in this report is required. Most people intuitively think of a mile of road in Maine as a “centerline mile”, i.e. a mile measured down the centerline of the road regardless of the number of lanes. However, this Study will often use lane miles (LM) to be more fair and accurate when comparing road mileages between municipalities. As its name implies, a lane mile is a mile for each lane of a road. A typical rural road in Maine has two lane miles (LM) for each centerline mile (CLM). A 4 lane road will have 4 lane miles for each centerline mile. In most cases (2 lane roads), you can convert to centerline miles from lane miles by simply dividing by 2.

There are two completely different highway classification systems in Maine. The Federal Functional Classification (FFC) system classifies highways using intuitive terms like Interstate, Arterials, Major Collectors, Minor Collectors, and Local roads. This system determines federal funding eligibility and whether a complex array of federal rules applies, among other things. Obviously, the federal system is required throughout the country and is not going away. As its name implies, the FFC system classifies roads based upon their function, and balances of mobility function (i.e. through traffic) with the local land access function. Simply put, the FFC focuses on how the road works, and is therefore the most relevant to maintenance and operations.

On the state level, there exists the state jurisdictional classification system that divides highways into “state highways, state aid highways and town ways”. It is used, among other things, to determine maintenance responsibilities and the nature and amount of local road assistance funding. The system has its origin over 100 years ago, and is laden with history. Before then, almost all roads were county, town, or otherwise local roads. Simply put, the state classification system focuses more on history of a road, and somewhat less on its function. Therefore, this system is not as operational relevant as the FFC system.

As this Study demonstrates, these two systems have never been reconciled, which has caused confusion and many negative consequences.

Using the FFC system as the base system, the 46,352 lane miles of public road in Maine can be broken down as follows.

<u>FFC</u>	<u>% of LM</u>	<u>% of VMT</u>
Interstate	3	23
Arterial	10	37
Major Collector	15	21
Minor Collector	11	7
Local	<u>61</u>	<u>12</u>
	100%	100%

Most people are initially surprised by two aspects of this mileage and traffic data (Vehicle Miles Traveled or VMT). The first is how so few miles of highway carry the bulk of all traffic. As shown above, the Interstate, Arterial and Major Collector highways represent only about 28% of the miles of public road in Maine, but they carry over 80% of the traffic. Obviously, these are the highway work horses, and are the most important to the economy. Accordingly, these roads must be a priority for the State, and they are. (See Highway Corridor Priorities below.)

The second surprising aspect of the data is how many miles of Local roads there are, and how little traffic they carry. The 61% of Local roads translates to over 28,000 lane miles (about 14,000 CLM), yet they carry only about 12 % of the traffic. That sounds like a lot of miles, and it is, but Maine actually has the lowest percentage of Local roads in New England, and the 9th lowest percentage in the country. By comparison, 74% of public roads in New Hampshire are Local. Of course, this means the state is responsible for many more roads in Maine than most other states.

Why? The biggest reason can be found in Maine’s unique “state aid” system. The “state aid” system is part of the current state jurisdictional classification system outlined above. The term “*state aid*” arose from the old process of the *state* providing municipalities with financial *aid* for local roads so Maine towns could “get out of the mud”. Before then, almost all roads were the responsibility of county, town, or otherwise local governments. Again, the term “*state aid*” itself is derived from the process of the *state* providing financial *aid* to municipalities for its local roads.

Under the “state aid system”, the State and municipalities share road responsibilities for “state aid” roads depending upon the season and the type of work. Generally speaking, municipalities provide winter maintenance, the state provides summer maintenance, and the state and municipalities share capital responsibility. Capital responsibility is shared on a 2/3 state, 1/3 municipal basis through the Rural Road Initiative (RRI) program, if funding permits. Given that RRI funding has been very limited, “improvement” of these roads is often limited to the State performing a thin paving overlay now known as Light Capital Paving (a.k.a. MST). When problems arise on these roads, the line between maintenance and capital work can be a hot topic of discussion between the municipality and the State.

Over time, the origin and purpose of the state aid system has been forgotten by many people outside of MaineDOT. Today, most municipalities have come to consider state aid roads as state roads that they have to plow. That is, the word “aid” seems to have disappeared from consideration, despite its historical significance.

When one superimposes the state jurisdictional system on the Federal Functional Classification (FFC) system, one finds the Major Collector highway system is split roughly equally between “state highways”, which generally are already the full, year-round responsibility of the State (47%), and “state aid highways”, which have the shared responsibilities noted above (53%). Further, virtually all Minor Collector roads are “state aid” roads with shared responsibilities. In most other states, Minor Collector roads are the full responsibility of a municipal or county level of government.

It is these “state aid roads” that are a major focus of this Study, consisting of 3,157 rural lane miles of Major Collector highways and 4,954 lane miles of Minor Collector roads. As is more fully described elsewhere herein, the Study found that the split responsibilities on these roads have led to unclear roles, operational inefficiencies, lack of accountability, and neglected roads. An old adage seems especially appropriate. “When everyone is responsible, no one is”.

Highway Corridor Priorities

To focus state resources on the roads that have the most value to the economy and to the most travelers, MaineDOT is in the process of formalizing a highway corridor prioritization system. Though it may seem new, it is really just a simpler, more transparent tool of performing the same basic job of prioritization that MaineDOT has always done.

The process of setting highway corridor priorities is multi-faceted. As part of MaineDOT’s Long Range Plan (*Connecting Maine*), MaineDOT worked with the state’s six Economic Development Districts (EDDs) to identify broad, multimodal transportation corridors that have higher economic importance to that region. The result was Corridors of Regional Economic Significance for Transportation or CRESTs. Additionally, MaineDOT reviewed and used the Heavy Haul Truck Network, the FFC classification system, and traffic volumes relative to the region to determine priorities. The result is a proposed system of six simple Highway Corridor Priority designations.

Priority 1 Corridors: These corridors include all of Maine’s Interstate system, plus those Arterials, Corridors of Regional Economic Significance for Transportation (CREST), and Heavy Haul Truck Network (HHTN) Routes that carry the top 20% of traffic in their Economic Development District (EDD).

Priority 2 Corridors: These corridors include all of the non-Interstate National Highway System corridors that are not already Priority 1, plus those Arterials, CRESTs, and HHTN Routes that carry 21% to 50% of the traffic in their EDD.

Priority 3 Corridors: These corridors include those Arterial, CRESTs, and HHTN Routes that carry less than 50% of the traffic in their EDD.

Priority 4 Corridors: These are basically the remaining Major Collectors highways.

Priority 5 Corridors: These are largely the Minor Collector roads (the subject of the MiCHIP program described herein).

Priority 6 Corridors: These are Local roads and streets.

State Route Numbering

An additional level of confusion arises from the state route numbering system. Most people would assume that a road with a state route number and marked by the standard state sign (black numbers on a white background) is a “state road” for which the state is responsible. Often, that is not the case. There are about 780 centerline miles of rural Minor Collector roads with state route numbers that municipalities plow, the State maintains in the summer, and have shared capital responsibility. This is over one third of all Minor Collectors. The other Minor Collector roads have no route numbers, and instead are identified with only road names like Local roads.

Predictably, travelers often contact the State when the road has a State route number and the municipality when it has a road name only. Customers can justifiably feel like they are getting the “run around” when they contact one level of government and are referred to another.

3. Study Team and Process

The Legislature charged MaineDOT with the responsibility of conducting this Study. To do so in a way that could achieve actionable results, MaineDOT sought to truly engage the stakeholders in a forthright and meaningful way, especially the municipal community. Municipalities understandably are wary of being given responsibilities without resources to discharge them. To respond, MaineDOT and the Maine Municipal Association (MMA) formed a 15 member Policy Working Group (PWG) to assist MaineDOT. MMA chose eight (8) members through an extensive voting and selection process, and MaineDOT chose seven (7). In fact, MaineDOT used five (5) of its slots to select more municipal officials to achieve better geographic and urban / rural balance. Only two members of the PWG were MaineDOT staff.

Members of the Policy Working Group

Elwood Beal, Lisbon Public Works Director
Michelle Beal, Ellsworth City Manager
David Bernhardt, MaineDOT
Bob Belz, Auburn Public Works Director
David Cole, Gorham Town Manager
Clint Deschene, Hermon Town Manager (Co-Chair)
Greg Dore, Skowhegan Road Commissioner
Richard Freethey, Brooklin Selectman (*Resigned 4/6/2010.*)
Gerry James, Presque Isle Public Works Director (*Appointed 3/26/2010 to fill vacancy.*)
Jim Hanley, Pike Industries
John Johnson, Jay Public Works Director
Rob Kenerson, BACTS
Galen Larrabee, Knox Selectman
Ryan Pelletier, St. Agatha Town Manager (*Resigned 2/26/2010.*)
Glen Ridley, Litchfield Selectman (*Appointed 4/8/2010 to fill vacancy.*)
John Sylvester, Alfred Selectman
Bruce Van Note, MaineDOT (Co-Chair)

The PWG was diverse and capable. Town managers, public works directors, engineers, and MaineDOT representatives all sat down, rolled up their sleeves, and worked to solve problems. In addition, the PWG formed two subcommittees: one focusing on standards and cost issues and one focusing on the special operational issues in urban or compact areas.

Members of the Standards and Cost Subcommittee

David Bernhardt, MaineDOT (Co-chair)
Richard Crawford, MaineDOT
Greg Dore, Skowhegan Road Commissioner
Rhonda Fletcher, MaineDOT
Jim Hanley, Pike Industries
Denny Keschl, Belgrade Town Manager

Galen Larrabee, Knox Selectman
Dale Mitchell, HNTB and ACECMaine
Roger Raymond, Bucksport Town Manager
Tony Smith, Mount Desert Public Works Director (Co-Chair)
Erik Street, Yarmouth Public Works Director
Bob Watson, MaineDOT

Members of the Urban Issues Subcommittee

Michelle Beal, Ellsworth City Manager
Greg Blackwell, Rockland Public Works Director
Mike Bobinsky, Portland Public Works Director
Dale Doughty, MaineDOT (Co-Chair)
Jerry Dostie, Augusta Public Works
John Duncan, PACTS (Co-Chair)
Rob Kenerson, BACTS (Co-Chair)
John Melrose, Maine Tomorrow
Mike Roy, Waterville City Manager
Chip Swan, Hampden Public Works Director

PWG and Subcommittee Staff

Peter Coughlan, MaineDOT
Kate Dufour, MMA

The PWG and Subcommittees held 35 meetings totaling about 120 hours over the course of a year. An estimated 32,000 miles were logged to attend these meetings. MaineDOT is indebted to the PWG and Subcommittee members for their dedication, professionalism, and work. Regardless of the outcome of this Study, MaineDOT feels fortunate to have had the opportunity to work with these people. MaineDOT would like to thank Clint Deschene, the PWG Co-Chair, and all other PWG and Subcommittee members for the time and sincere effort. Further, the team is indebted to Kate Dufour of MMA, who took the minutes of the PWG, helped create Agendas, arranged meeting space, and helped keep the effort on track, as well as Pete Coughlan of MaineDOT for his dedication and support. Without them, this Study could not have happened.

In addition to the more formal committees, an open enrollment Sounding Board, which included all Transportation Committee members, was formed. Three Sounding Board meetings lasting for 3 to 4 hours each with attendance of 50, 75, and 102 were hosted by the Maine Municipal Association (MMA). The discussion was informative and straightforward. Opinions were varied, but a constant theme emerged that said “*we should keep talking because the status quo is unacceptable*”.

Websites were set up at both MaineDOT and MMA, and PWG minutes and progress reports were posted. See <http://www.maine.gov/mdot/hss/index.htm>. Updates written by Kate Dufour appeared in MMA’s monthly “Maine Townsman” periodical. Briefings with extensive handout materials were held at the MMA annual convention, and the MMA Legislative Policy

Committee had a brief, closed door discussion. Pete Coughlan traveled to many municipalities to explain possible specific impacts on them.

In the end, all municipalities had ample opportunity to be heard, and input received was carefully considered. Significant and costly changes to proposals were made. In sum, although further education and outreach is always worthwhile, it appears unlikely that more process would yield significantly different policy recommendations.

4. Policy Goals and Political Realities

Policy Goals. After many meetings and much discussion, the PWG adopted the following policy goals, consistent with the Legislative directives for the Study (see Appendix A).

- a. Simplicity: To the extent possible, the highway classification system, compact definitions, and related definitions and responsibilities should be as simple as possible. If possible, we should have only one highway classification system, and one definition of compact or built up area that determines road responsibilities.
- b. Equality: To the maximum extent possible, we should ensure that all municipalities (urban and rural) are treated the same in the policies used to define maintenance and capital responsibilities and distribute local road assistance dollars. For example, under current law, state financial assistance for local roads at \$600 per mile is paid only for rural roads, and not for roads in currently defined urban compact areas. Further, to the maximum extent possible, compact areas that are alike in terms of size of continuous density should be treated the same. That is, if it looks and feels the same, policy should generally treat it the same.
- c. Clearer Responsibilities - Promote the “24-7-365” Principle: We should assign road maintenance responsibilities so that one entity, either the state or the municipality, has year-round responsibility over certain classes or sections of roads. This will improve emergency response, operational efficiency, investment decisions, and customer service. Everyone should clearly know what their job is.
- d. Improved Operational Efficiency: We should develop a system that is more efficient. For example, we need to minimize situations where both the state and municipality travel the same roads during plowing, with each dropping and picking up plows.
- e. Better Customer Service - Choose the Right Entity for the Job: We should create a system that improves or at least retains the same level of customer service by assigning tasks to the entity with the right skill set for the job. For example, the state is better suited to maintain more rural areas, while municipalities have the equipment and capacities necessary to do the more detailed work in downtown and commercial areas (i.e., maintenance of sidewalks, enactment of parking bans, etc.).
- f. Frame a Clear Policy Choice: Prioritize and/or Pay: We need to demonstrate that further efficiencies can achieve some savings, but the order of magnitude of the savings will represent only a small fraction of the problem of inadequate capital funding. Maine policymakers and citizens need to make a choice to either prioritize investments and levels of service, pay more for higher levels of service, or some combination of both. The Study team is comfortable with whatever is chosen, as long as people understand the issues and acknowledge the impacts.

Political Realities Acknowledged. Though the Study was aimed at promoting these policy goals to the maximum extent possible, it was understood that any changes to highway classification, compacts, and related responsibilities must balance the following political realities.

- a. Efficiency Must Be Considered and Put in Context. The Study must acknowledge that more can be done to squeeze savings through efficiency efforts, but it must also place the savings in context. For example, recent efficiency efforts at MaineDOT have yielded annual savings from reduced payroll alone at over \$14 million per year. But by any measure, the capital funding deficit stands at an estimated \$150 to \$300 million per year, depending upon priorities and capital goals.
- b. Outreach to Municipalities: Without municipal support, successful implementation of Study recommendations is very unlikely. For that reason, municipal officials must be provided all of the information they need to assess the financial, practical and customer service impacts of the proposal.
- c. Municipalities Need to See Reliability of State Commitments: We need to address the concern of municipal officials regarding the ability of the state to honor its financial commitments in both good and difficult economic times. Without an appropriate level of reliability, municipal officials will be unwilling to move forward with a process that requires a “leap of faith” by both municipal and State officials.
- d. Mitigate Extraordinary Impacts. We need to realize that all municipalities have their own particular road inventory. Some have many Major Collector highways; some have many Minor Collector roads. The impact of a “Fix and Swap” strategy include benefits (improved Minor Collector roads at 100% state expense, state takeover of winter maintenance activities on Major Collector roads, increases in local road assistance funding) and the challenges in some municipalities (number of Minor Collector roads and related summer and ongoing capital responsibilities). We need to ensure that extraordinary impacts are considered and addressed. We need to ensure that urban and rural communities are treated equitably to garner broad-base support and minimize urban-rural discord. We may need to allow some exceptions to “simplicity”. Experience shows we will need many more perceived “winners” than “losers” to make this work politically.

5. Findings and Conclusions

The Policy Working Group made the following findings and drew the following conclusions.

- a. The current situation of dual highway classification systems – federal and state - is complex and confusing.
- b. The study and simplification of the current complex, dual system is itself complex and will take many years to unwind. However, with sufficient communication, teamwork between the State and municipalities, and funding, a simpler and better system of highway classification and related responsibilities is possible and the right vision to pursue.
- c. Because use of the FFC is required and intuitive, it should be adopted as the only classification system in Maine, and augmented by Maine law to serve both federal and state purposes.
- d. The state jurisdictional classification system is rare, if not unique. The state aid system splits responsibilities between levels of government leading to unclear roles, operational inefficiencies, finger pointing, and poor customer service. This system should be phased out and eventually eliminated over time.
- e. The State and municipalities will always remain partners in providing our customers with a safe, efficient and reliable highway system that supports economic opportunity and quality of life.
- f. Generally speaking, the State and local authority and responsibility regarding a road should vary depending upon its FFC classification. Obviously, the State should be primarily responsible for highways of interstate, statewide, and regional significance that carry most of the through traffic, and municipalities should be primarily responsible for roads of more local significance that primarily provide local access. To achieve better operational efficiency, customer service and decision-making, roles should be as clear as possible, and some entity should be in charge of a given road. Except in compact areas, that entity should be fully responsible for that road, meaning it generally should have year round maintenance and capital responsibility.
- g. Under current law, the State is already fully responsible for Interstate, Arterial, and about half of the Major Collector highways, except in urban compact areas. Municipalities are already fully responsible for Local roads, though the State provides some funding assistance for rural Local roads. The question is how to fairly redefine and simplify the partnership between the state and municipalities with respect to the other half of Major Collector highways and the Minor Collector roads.
- h. In the FFC system, highways of interstate, statewide, and regional significance are the Interstate, Arterial, and Major Collector highways. Given the significance and functions of these roads, the fact that federal funding generally can only be used on highways classified as Major Collector and up, and given that MaineDOT is better able to satisfy

the extensive and complex federal requirements that come with such funding, it makes sense for the State to be fully responsible for Interstate, Arterial, and all Major Collector highways.

- i. Minor Collector roads have more local significance. In most states, they are a county or local responsibility. If capital and local road assistance funding is provided as recommended in this Study, municipalities could assume responsibility for Minor Collector roads in Maine.
- j. From a state perspective, Minor Collector roads are relatively low priority (Priority 5 of 6). These roads are not eligible for most federal funding sources. Limited state funding has meant Minor Collector roads have not received much capital attention, and they are in some of the worst condition in the state. From a different perspective, Minor Collector roads are often very important to municipalities, and can be the main road in some towns. Municipal officials, the State, and Legislators receive numerous inquiries on these roads due to their poor condition.
- k. The current state aid system is not working well. The state has prioritized its funding to highways serving more traffic. Even Light Capital Paving (a.k.a. MST) is not always reliably funded. Further, the state funding for the capital RRI program has been very limited, and most municipalities have not stepped forward with the required one-third share. Confusion about what is maintenance vs. what is capital, and what is winter vs. summer maintenance is widespread. Due to our unique “state aid” system that does not make any one governmental entity responsible for the road, state aid Major Collectors and Minor Collector roads have been effectively orphaned over time. In sum, the current system appears broken, and change is needed. The status quo is unacceptable.
- l. Based on a municipal cost survey done as part of this Study – the best known to the PWG – the per mile cost of highway maintenance services provided by MaineDOT and municipalities are comparable. No level of government is obviously more efficient than the other.

Based upon the survey data and methodology, average winter maintenance costs for municipalities were about \$3,450 per lane mile, and \$4,300 per lane mile for MaineDOT. Given the classifications and nature of the State winter roads (wider, higher traffic volumes, higher speeds) and related level of service needs, this is understandable.

Average summer maintenance costs were about \$3,440 per lane mile for municipalities, though they varied considerably. MaineDOT summer maintenance costs averaged about \$2,555. These costs do not include capital work such as paving.

Due to economies of scale, the marginal cost of adding a lane mile of work generally would be lower than the costs given above.

- m. A review of State and municipal paving specifications did not yield obvious opportunities for dramatic productivity gains. Many municipal specifications simply incorporate MaineDOT specifications. Some municipalities have achieved lower initial capital costs by using more flexible quality control processes.

- n. In larger compact areas, it is in general operationally more efficient for the municipality to provide year round maintenance for all roads within the compact area, including Arterial and Major Collector highways that are a state responsibility. Clearer roles will eliminate confusion, increase efficiency, and yield better service to highway users.

6. Recommendations

Based upon these finding and conclusions, the Study makes the following recommendations.

Major Recommendation #1:

Migrate to a Federal Functional Classification Based System as the Sole Classification System in Maine Through a “Fix, Swap and Help Fund” Strategy

To promote long-term simplicity, clarity of roles, accountability, local control and efficiency, the State should gradually migrate to a Federal Functional Classification based system as the sole highway classification system in Maine. The FFC should be used to define highway responsibilities in Maine including maintenance, capital, and local road assistance funding. Accordingly, we should phase out of the state jurisdictional classification system.

The use of the federal functional classification (FFC) system is required throughout the country and is intuitive. As its name implies, the FFC system classifies roads based upon their function, and balances of mobility function (i.e. through traffic) with the local land access function. At the ends of the spectrum, the function and classification in the FFC system are obvious. Other road classifications in the FFC can also be reasonably well defined. Maine should adopt road classification definitions that are consistent with federal rules and guidance.

Interstate and other controlled access highways obviously serve a statewide mobility function.

Arterial highways primarily serve the mobility function by providing longer through travel between major vehicle trip generators (major cities, freight origins or destinations, recreational areas, etc).

Major Collector highways collect traffic from county seats and larger population centers and link local traffic generators with arterials.

Minor Collector roads generally collect traffic from local roads and sparsely settled areas and connect them to Major Collector highways or Arterials.

Local roads are primarily for abutting land access and provide service over relatively short distances.

There is a completely separate state jurisdictional classification system that divides highways into “state highways, state aid highways and town ways” is not as relevant to the function and operation of the road. Maine’s unique “state aid” system of split responsibilities depending upon the season and the type of work have led to negative consequences including unclear roles, lack of accountability, operational inefficiencies, finger pointing, and inadequate customer service. Having two classification systems creates complexity and confusion. Accordingly, the Study finds that the state jurisdictional classification should be phased out.

Under current law, the State is already fully responsible for Interstate, Arterial, and about half of the Major Collector highways, except in compact areas. Municipalities are already fully responsible for local roads, though the State provides some funding assistance. All roads, even lower priority ones, deserve an “owner” 24 hours a day, 7 days a week, 365 days a year. The question is how to fairly redefine and simplify the partnership between the state and municipalities with respect to the other half of Major Collector highways and the Minor Collector roads that form the existing “state aid system”.

Intuitively, the State should be primarily responsible for highways of statewide and regional significance that carry most of the through traffic, and municipalities should be primarily responsible for roads of more local significance that primarily provide local access. In the FFC system, highways of interstate, statewide, and regional significance are the Interstate, Arterial, and Major Collector highways. Given the significance and functions of these roads, the fact that federal funding generally can only be used on highways classified as Major Collector and up, and given that MaineDOT is better able to satisfy the extensive and complex federal requirements that come with such funding, it makes sense for the State to be fully responsible for Interstate, Arterial, and all Major Collector highways.

Minor Collector roads generally provide local or limited regional benefit. Accordingly, it makes sense for municipalities to be responsible for all Minor Collector roads, in addition to Local roads.

So how do we get there? How do we transition to a system based upon the FFC system and phase out Maine’s unique “state aid” system? This Study recommends a “Fix, Swap, and Help Fund” strategy.

Fix: The MiCHIP Program

Over an estimated 12 year period, this Study recommends that the approximately 4,954 lane miles of Minor Collector roads be improved to a reasonable design standard at 100% state expense. These are some of Maine’s worst roads located in every corner of the state. This one-time state fix would become known as the Minor Collector Highway Improvement Program, or MiCHIP.

The Study team agreed upon a design standard with a useful life of 10 years, to be known as the MiCHIP standard. See Appendix B. After 10 years, it is expected that some type of lower cost paving treatment would be needed. Like all roads, custodial maintenance is required on an ongoing basis. The intent behind the Standard is not the full reconstruction or major rehabilitation of the roadway, but a highway improvement that would provide a smoother ride for the traveling public and for easier winter maintenance by the municipality. If the municipality desired a higher design standard, they would be free to achieve one at municipal expense.

The estimated unit cost of a MiCHIP project is \$65,000 per lane mile of rural road (in today’s dollars). This is substantially more than the \$21,000 per lane mile cost of the state’s Light Capital Paving (a.k.a. Maintenance Surface Treatment (MST) or skinny mix). But it is much less than the cost of full reconstruction, which generally ranges from \$375,000 to \$500,000

per lane mile. Unit costs in compact areas will be higher (typically ranging from \$100,000 to \$265,000 per lane mile), but compact mileage represents only about 14% of the Minor Collector inventory.

Due to the large number of miles statewide, the cost of this capital program will be substantial. The Study estimates an annual capital need of a 12 year MiCHIP program will start at \$35 million in year 1, and increase to about \$45 million by year 12, assuming construction inflation averages 2 ½ percent per year. This yields an estimated total 12 year MiCHIP capital need of about \$482 million. For a breakdown of these costs, see Appendix C.

This total MiCHIP cost would be offset by a reduced demand in MaineDOT's Light Capital Paving (a.k.a. MST) program, because about 400 lane miles of these Minor Collector roads would be treated under the MiCHIP program, and would not require Light Capital Paving. The estimated offset amount would start at about \$8.4 million in year 1 (400 miles x \$21,000), and would rise to over \$11 million in year 12, again assuming construction inflation averages 2 ½ percent per year. This means the total 12 year amount of the Light Capital Offset amount will be an estimated \$119 million, which when subtracted from the MiCHIP total program cost of \$482 million, yields a net capital cost of \$363 million.

Many municipal officials expressed concern about the State's ability or desire to fund such a program over time. Though understandable, there are at least two potential safeguards against this concern. First, there will be no swap of responsibilities until the all the Minor Collectors in that municipality are improved. Simply put, until the State walks the walk, nothing changes. Second, the MiCHIP program could be designed as an "off the top" transfer to a new account with the TransCap Trust Fund at the Maine Municipal Bond Bank. In this way, the funding could be better protected from competing needs. Whether the TransCap mechanism should even exist may be debated by the 125th Legislature, so clearly this is a policy question that needs further review and analysis.

In terms of development process, each Minor Collector road would be subject to a walk-through with MaineDOT and municipal officials. Municipalities could augment the project scope at its expense to achieve a higher standard if desired. The method of project contracting and delivery can be flexible, as federal funding is generally not eligible for these roads and federal rules normally do not apply. Delivery options through MaineDOT or municipalities will be explored, which may reduce costs. After discussion and evaluation, a written memorandum of agreement on scope, costs, and project delivery would result.

In case of disputes, an informal three-step resolution process would be available. First, all disputes would be addressed at the local level between the designated municipal representative and a MaineDOT Transportation Operations Manager. If the dispute could not be resolved locally, the designated municipal official and MaineDOT's Region Superintendent would try to resolve the conflict. If the dispute could not be resolved at that level, then a Review Board would step in to resolve the conflict. The Review Board would consist of five members, two MaineDOT representatives and one alternate appointed by the Maine Department of Transportation, two municipal representatives and one alternate appointed by the Maine Municipal Association and one "neutral party" mutually appointed by the state and municipal

representatives on the Review Board.

Many municipal officials expressed the desire for a more aggressive and costly capital improvement standard for the Minor Collector roads. That is understandable from their perspective, as they will be responsible for the road long-term, and they want to “get as much as they can”.

On the other side of the debate, analysts focused on statewide travel or user benefit, as opposed to more local needs, reasonably expressed concern over whether the State should invest even this much money into the Minor Collector system. Such analysts cite the capital needs on higher priority highways, the relatively low priority of that Minor Collector roads (Priority 5 of 6), the low traffic volumes (7% of VMT), and state capital funding shortfalls. There are at least three responses to this concern.

First, these roads are main streets for many municipalities and are in some of the worse shape in the State. They have been effectively orphaned over time, with no entity taking responsibility for them, because the responsibility was shared under state law. All roads, even lower priority ones, deserve an “owner” 24 hours a day, 7 days a week, 365 days a year and require capital attention. The question is to what standard and who pays.

Second, through the Study process, municipalities and the State have agreed to a realistic, MiCHIP standard. The per lane mile cost of improving a rural lane mile to this standard is reasonable - \$ 65,000. In return for this one-time state investment, the State will receive a valuable, long-term benefit – the rationalization of our system of road responsibilities such that Maine becomes like most other states in having local government responsible for Minor Collector roads. At this standard and cost, and with this long term benefit, the investment can be justified.

Lastly, and most pragmatically, it is simply not politically possible to change road responsibilities without improving the roads first. In urban compact areas, Maine law has long provided that roads must be in “good condition” before responsibilities are transferred to municipalities. See 23 MRSA Section 754(3). The policy behind this law is rooted in Maine’s long and strong tradition of local control. Municipal officials are elected to focus on “their town” – its roads and finances. Though municipal representatives may acknowledge a statewide or regional perspective, that simply is not their primary concern. It is not what they were elected to do. Maine’s system of local control is a bedrock political principle. Policy changes simply must take that into account. This Study does so and seeks to go further. It seeks to transition to a better system of road responsibilities in partnership with municipalities in a fair and open way. To do so, the PWG determined that Minor Collector roads must be improved.

Swap: Splitting the State Aid System

On the initial July 1st after all the Minor Collector roads in a municipality have been improved, road responsibilities would be swapped so that they are clearly with the state or the municipality. Again, this means that the State has to deliver on the capital funding and project delivery before responsibilities shift.

It is important to emphasize that this is not a one-way turn back of roads; it is a swap. The state would become responsible for plowing all Major Collector highways, including state aid Major Collector highways now plowed by municipalities. (The State already plows the rural state highway Major Collectors.) Municipalities would have summer maintenance and primary capital responsibilities on the newly improved Minor Collector roads. Further, new, simple, and increased per mile rates for state Local Road Assistance funding would take effect for that municipality. See Major Recommendation # 3 below.

Arguing over whether a certain activity is winter maintenance, summer maintenance, or a capital activity largely would be a thing of the past. Everyone would know what their job is, and travelers would know who to contact with concerns. After the transition, the state jurisdictional classification system will be effectively eliminated, and we will have one, logical highway classification system in Maine based upon the FFC system.

On a statewide basis, the State would become responsible for winter maintenance on about 3,157 lane miles of rural state aid Major Collector highways. The State would discharge these responsibilities in a variety of ways including extending plow routes and contracting (including honoring all reasonable municipal contracts that may be in effect). Municipalities would become responsible for about 4,954 lane miles of newly-improved Minor Collector roads. Again, the swap would happen over time, town by town, gradually over a 12 year period, as the Minor Collectors are improved. How the swap will impact each municipality will depend upon its road inventory – whether it has all Major Collector highways, all Minor Collector roads, a combination of both, or neither.

Though there are more Minor Collector miles than Major Collector miles, it is important to note that the nature of the responsibilities being swapped is different. Plowing, of course, is a necessary activity that must be done every year. Simply put, you have to plow. It is nondiscretionary. Conversely, summer maintenance and capital work on a newly improved road is a more flexible activity, the frequency and cost of which will depend upon local standards, road conditions, availability of funding, and the will of the legislative body of the municipality. This means that even though the number of miles is different, it can be argued that the immediacy of impact on “must do” operational budgets is more favorable to municipalities.

To help clarify the swap in responsibilities and to increase accountability, the MiCHIP process will include enhanced signage. On numbered roads that are or will be the year round responsibility of the State, they will continue be marked with standard “black on white” state route signs, such as the Route 52 sign shown at right. This means that all roads classified as Major Collector and higher will have these signs. To the layman, the state route sign means state road. Simple.



However, on the Minor Collector roads that currently have state route numbers, signs would have a completely different look. A gold on blue sign conforming to national standards would clearly signal to all that the road is a local responsibility. An example of such a proposed Minor Collector route number sign is shown for Route 173 at right. There are about 780 centerline miles of rural Minor Collector roads. This will allow instant and easy accountability.



Help Fund: Sharing the Ongoing Cost of Light Capital Paving

As noted above, at the conclusion of the work of the Policy Working Group, the only substantial unresolved policy issue was the long-term responsibility for the capital improvement of Minor Collector roads.

Given the local origin of most of these roads, their primarily local benefit, state highway funding shortfalls, and the need for the State to realize a benefit from its substantial investment, MaineDOT's original "Fix and Swap" proposal called for 100% local capital responsibility after the one-time MiCHIP fix at state expense. Again, this would put Maine in line with most states, where Minor Collector roads are usually a local or county responsibility. There was substantial support for this position in the PWG and the broader Sounding Board meetings, though it could not fairly be considered consensus.

On the other end of the spectrum, MMA's Legislative Policy Committee in November 2010, after a relatively brief discussion that did not include MaineDOT representatives, called for the State to remain 100% responsible for all Minor Collector capital costs forever. They labeled this proposal "Fix and Share". Given fiscal realities, the need for a single "owner" in control of the road, and the desire to rationalize the system, at the PWG level MaineDOT rejected the LPC position.

To attempt to find common ground, MaineDOT now proposes an on-going funding program aimed at equally sharing the on-going cost of Light Capital Paving, to be known as the MiCHIP Funding Program. This program would come into existence only after the MiCHIP capital improvement program has been completed – about 12 years from now. The existence of this funding alternative for municipalities would not alter the municipality's responsibility or control over the Minor Collector roads. They will have complete control and responsibility for standards, level of service, contracting, etc. They are the owner. In this respect, the State would be acting more like a home equity line of credit lender, not a co-owner.

The total annual amount of the MiCHIP Funding Program would be capped at one half of the cost of Light Capital Paving of one-seventh of the Minor Collector System. This is set to reflect the State's 7-year paving cycle. It is estimated that the cost of this program initially will

be about \$10 million per year, assuming 2.5% construction inflation over 12 years, and the current estimated cost of Light Capital Paving (a.k.a. MST or skinny mix) of \$21,000 per lane mile. For the background of this calculation, see Appendix F.

Program mechanics will be simple. All municipalities with Minor Collector roads would be eligible to access this fund on a first come-first serve, 50-50 basis. Project eligibility requirements will be minimal. The municipality only needs to certify that (1) the project being funded is a capital improvement to a Minor Collector road, and (2) the legislative body of the municipality has voted to raise the 50% municipal matching funds. The State will not question specifications or other technical aspects of the job (though the Local Roads Center will be available for assistance if desired by the municipality). Again, the municipality “owns” the road. A maximum per-mile cap on the State investment in each project will be one half of the cost of Light Capital Paving of the project area. If there is insufficient program demand, this per mile cap may be waived. Municipal funding requests would roll over year to year, meaning if all the funding is used, the municipality is already in line for next year. If there is insufficient municipal demand, the funding will lapse to MaineDOT’s highway capital programs for that year only.

It is acknowledged that municipalities may desire more state funding for more aggressive capital treatments, arguing that these are “state roads”. Again, recall that these were originally local or county roads that later became “state aid” roads. Some state aid will still be there. The MiCHIP Funding Program is specifically intended to be a limited, partial funding component to help with basic serviceability paving only. More aggressive treatments should be at the expense of the municipality as the bulk of the benefit is realized locally.

Major Recommendation #2:

Redefine Compact Areas and Related Responsibilities

As noted above, the current state law definitions of urban compacts and winter compacts are confusing and appear to treat similar compact areas differently. For example, under current law, Gardiner and Lisbon have year round maintenance responsibilities of all State roads in the compact areas, while Camden and Ellsworth have winter responsibilities only, and Gray and Hampden have none. All have public works staff and the ability to do the work. The reason for the disparity in treatment is largely historical and population based. There are currently 43 state urban compacts that have year round maintenance responsibilities and 14 winter compacts that have only winter maintenance responsibilities.

By revising how “Compacts” and related responsibilities are defined, there is an opportunity to simplify, increase equity between municipalities with similar compact areas, match operational skills with the nature of the road, increase operational efficiency, heighten accountability and enhance customer service. Simply put, municipalities are more sensitive to compact areas and the businesses in them, and are better geared to serve them. The State is better geared toward serving through travelers on rural mileage.

To reach these policy goals, it is recommended that State law be changed to redefine a “Compact” as an area that has at least 2.5 centerline miles of contiguous built-up development on Arterial and Major Collector highways. The long-standing statutory definition of “built-up” – a “section of the highway where structures are nearer than 200 feet apart” - would remain. See 23 MRSA 2(1). The current population-based definitions of urban compacts and winter compacts would be eliminated. Federal definitions regarding urban areas and MPO’s would continue to have no relevance to defining compacts and related maintenance responsibilities.

The result would be one simple definition of “Compact”, and all municipalities would have the same responsibilities to the maximum extent possible. The nature and size of the built up area will be the primary factor of whether an area is designated compact, because it is simple and the most relevant to maintenance and operations.

After extensive work applying the proposed definition, MaineDOT estimates that there are 75 municipalities with Compacts. Throughout the Study process, the municipal community expressed concern that municipalities with lower populations may not have the operational, administrative or financial capability to assume compact maintenance responsibilities. Though a population-based threshold was not favored by most Study participants throughout much of the process, the PWG, acknowledging political realities, voted (with only 1 dissenting vote) to recommend that all municipalities with a population less than 4,000 be allowed to “opt out” of being treated as a Compact. With such a provision, 12 municipalities can opt out and 63 municipalities will be required to be compact. A list of these municipalities is attached as Appendix D.

Once a municipality meets the 2.5 mile statutory threshold, MaineDOT and the municipalities will be encouraged to discuss and set the actual, on-the-ground Compact limits to maximize overall operational efficiency. If a Compact boundary needs to move one way or the

other to reach a certain cross road or turnaround, we should do what makes operational sense. Changes to the statutory Compact boundaries will be by mutual agreement, and such approval should not be unreasonably withheld by either party. Such changes to the statutory boundaries will be negotiated locally and be clearly marked in the field with MaineDOT signage to facilitate accountability and enhanced customer service. To assure consistency across the State, such changes will need to be reduced to writing, including an informal map, approved by the Director of MaineDOT's Bureau of Maintenance and Operations Bureau, and reflected in MaineDOT's Geographic Information System (GIS). Disputes can be referred to the Appeals Committee recommended below.

To further enhance equality between municipalities, it is recommended that any municipality and MaineDOT can agree that the municipality "opt in" as a Compact as well. That is, even if the compact area has less than 2.5 centerline miles of contiguous built-up development on Arterial and Major Collector highways, they can apply to MaineDOT to be treated as a Compact. Whether mutual agreement can be reached will be based upon the operational, administrative, or financial capabilities of the municipality. MaineDOT has an obligation to through travelers on its Arterial and Major Collector highways to review such criteria. In the past, some representatives of rural towns have argued that the URIP per mile rates paid to urban compact municipalities is high relative to rural towns. This will put all municipalities on a level playing field. If a municipality can do the work and think the rates are a good deal, they can opt in with MaineDOT approval.

Within the newly defined Compacts, it is generally operationally more efficient for the municipality to provide year round maintenance for all roads within the Compact area, including Arterial and Major Collector highways that are a state responsibility. Year round maintenance in Compact areas includes controlling snow and ice, plowing sidewalks, removing snow, enacting parking bans, cleaning catch basins, replacing culverts, patching potholes, but does not include paving. Just like in non-compact areas, the state should be responsible for all capital needs of Major Collector and Arterial highways. This will include pavement preservation and Light Capital Paving (MST), which currently only occurs in rural areas. Municipal authority and responsibility would also include administrative tasks such as driveway permitting and utility opening permits. Technical assistance including training should be available for municipalities undertaking these duties. After much discussion, the Study yielded a simple listing of municipal and state Compact Area Responsibilities. See Appendix E.

Of course, municipalities should be compensated for the maintenance they are performing on the state's Arterial and Major Collector highways. (Interestingly, the study has yielded reports of cases in which municipalities have provided some of these services - including reconstruction - on state roads without state financial participation to better serve the customer.) As one will see as part of Major Recommendation #3 below, the per mile Compact rate for such maintenance is proposed at \$4,000 per lane mile.

One member of the PWG advocated for a more complicated three tiered approach, with responsibilities and reimbursement rates varying depending upon population. Although interesting, MaineDOT and most PWG members respectfully rejected this approach as contrary to simplicity and equality between municipalities. Instead, it is recommended that a provision in law allow MaineDOT and a Compact municipality to agree that the municipality does not have

to perform certain compact tasks, perhaps at a reduced per mile rate, if the municipality can demonstrate that it does not have the operational, administrative or financial capability to perform these responsibilities. Disputes can eventually go to the Appeal Committee for resolution. Again, this provides a level playing field for all.

Like rural towns, Compact municipalities should be fully responsible for all Minor Collector roads including maintenance and capital, after they are improved by the State through the MiCHIP program. To implement this policy, state law must augment the FFC system and define Compact Major Collector highways and Compact Minor Collector roads. Put another way, if we are to treat all communities similarly then we must distinguish between Major Collectors and Minor Collectors inside federal urban areas in the same way we do outside them. To do so, the Study recommends using the following, common-sense criteria to define Compact Major and Minor Collectors.

- Continuity. A Minor Collector coming into a federal urban area will continue to be a Minor Collector. A Major Collector coming into a federal urban area will continue to be a Major Collector. These typically are of regional or statewide significance.
- More regional significance. Collectors with beginning and ending points within compact areas will be Major Collectors if they are the principle connections to hospitals, airports, industrial parks, large shopping areas, and other regionally significant large traffic generators, acted as regional connections and having high AADT's relevant to the surrounding area, or considered Truck Haul Routes.
- More local significance. Collectors with beginning and ending points within compact areas will be Minor Collectors where they serve mainly residential or retail uses, make connections primarily used within compact area, have low to moderate AADT's relevant to the surrounding area, and function more like a local road.

All roads within the Compacts have been preliminarily defined and mapped by MaineDOT. Mileage and spreadsheet data included as Appendix G reflect these definitions. However, like all other Study recommendations, they do not have the force of law and therefore have no operational or financial impact at this time. If this Study leads to law, more municipal communication will occur. In the meantime, Compact municipalities that desire to assess possible future impacts can contact Peter Coughlan of the Local Roads Center at MaineDOT.

Major Recommendation #3:

Revise Local Road Assistance Funding to be More Fair and Predictable

To make any simplified system work, the state financial assistance provided under the current Urban Rural Initiative Program (URIP), 23 M.R.S.A. §1803-B, et. seq., needs to be revised. This study recommends repealing the current complex URIP funding formula and replacing it with a simpler and predictable Local Road Assistance program. Under the revised formulas, almost 80% of all municipalities will receive more funding. Only about 20% will gradually receive less, in relatively small dollar amounts, due to the phasing out of the “hold harmless” provision included in the 1999 URIP law change.

The proposed new Local Road Assistance rates are designed with simplicity and equality in mind. Generally speaking, all municipalities will receive the same amount of state assistance for each lane mile of Local and Minor Collector road. (The state jurisdictional system would be largely irrelevant to this reimbursement.) Unlike the current system, the rates will apply regardless of where the Local or Minor Collector road is located.

It is important to understand that these rates are in no way intended to compensate the municipality for the total costs associated with its roads. Municipalities have motor vehicle excise tax and other funding sources for this purpose. This proposed system of Local Road Assistance is just that – assistance for local roads. At its essence, it is municipal revenue sharing of the State Highway Fund.

This Study recommends maintaining the current rate for Local roads of \$300 per lane mile for seasonal Local roads and \$600 per lane mile for year-round Local roads, and extending it to all Local roads. Currently, only rural local roads receive this reimbursement rate.

Similarly, all PWG members supported a \$1,200 per lane mile rate for Minor Collector roads after the fix and swap has occurred. This reflects the fact that Minor Collector roads have a slightly higher statewide significance than Local roads.

At this point, the PWG found that the policy principles of simplicity and equality had to yield to political realities with respect to municipalities that had “Excess Minor Collector roads”. To understand this, one must realize that the impact of the “Fix, Swap and Help Fund” concept varies depending upon the makeup of the road inventory in each municipality. Municipalities with lots of Major Collector highways relative to Minor Collectors make out well under the plan, because they will be relieved of the nondiscretionary cost of plowing. Municipalities with lots of Minor Collector roads perceive the impact differently. Even though they will receive more improved Minor Collector roads, they obviously are concerned with the long-term cost of summer maintenance and primary capital responsibilities.

After much discussion in the Policy Working Group, and a subset of the PWG focused on fiscal impacts, it was agreed that with respect to municipalities that have more Minor Collector roads than state aid Major Collector highways, the state will pay an additional stipend rate – on top of the \$1,200 base rate – for each excess mile. One calculates the additional amount a

municipality will receive as follows: take the number of Minor Collector miles, subtract the number of state aid Major Collector miles, and if that difference is positive, multiply that difference by the stipend rate. After continued long discussions, it was agreed to set this stipend rate at \$2,240 per lane mile. The rationale for this rate was that when the stipend rate is added to the \$1,200 Minor Collector base rate, the total Minor Collector rate in those municipalities will be \$3,440, the average cost of summer maintenance according to the cost survey performed by this Study.

This proposed stipend has at least three policy concerns. First, it is costly. Once the “Fix and Swap” is fully implemented (12 years out), the State cost of the stipend is about \$7 million. Second, it is relatively complicated and therefore is not as easy to explain. That makes education difficult. Lastly, it will have the effect of abutting towns receiving different rates of Minor Collector roads, raising possible future equity arguments. Despite these concerns, after much debate and consideration, the PWG unanimously recommended that the above described stipend be included. Simply put, policy agreement requires compromise.

Analytically separate from the “revenue sharing” rates for Local and Minor Collector roads described above is the “Fee for Service” reimbursement for the marginal cost of year round maintenance work performed by municipalities on the State’s roads - Arterial and Major Collector highways - in Compact areas. This rate was set at \$4,000, comparable to the current URIP rate.

In summary, the proposed new Local Road Assistance Rates would be as follows.

<u>Classification</u>	<u>Rate per LM</u>
Local – Seasonal	\$ 300
Local- Year round	\$ 600
Minor Collector-Base Rate	\$1,200
Minor Collector-Stipend	\$2,240
Fee for Service-Compact	\$4,000

In any broad-based policy initiative, the acid test comes at the spreadsheet phase. A spreadsheet depicting the fiscal impact of the Study recommendations after full implementation (year 13) is included as a separate legal sized handout as Appendix G and can be found online at <http://www.maine.gov/mdot/hss/index.htm> . As you can see in the columns to the right, the vast majority of municipalities – almost 80% - will see an increase in their state Local Road Assistance. The remainder – about 20% - will gradually see relatively small reductions in payments. Why? Because it is recommended that the “hold harmless” provision included in the 1999 URIP law change (then as an accommodation to political reality) be gradually phased out over a four year period. That means even the municipalities showing a reduction will not see it immediately, and will be able to plan for its predictable reduction over time.

From a State budget perspective, after full implementation of the “Fix and Swap” strategy, total annual state Local Road Assistance payments to municipalities would increase from the \$23 million in FY2010 to about \$36 million, an increase of about \$13 million or 58%.

The proposed new Local Road Assistance program would have at least three more important elements.

1. Make Payments More Predictable. The current methodology of tying URIP payments to MaineDOT's Highway Fund budget would be repealed. This current provision limits predictability for State and municipal budgeters. Further, with state Highway Fund revenues often dropping due to increased fuel efficiency of automobiles, its limited municipal benefit does not justify its complexity. Instead, it would be replaced with a simpler, "off the top" calculation based upon the statutory rates and number of miles of each highway classification. These rates can be reviewed every four years as part of the periodic review on the overall simplification effort recommended below.

2. Repeal URIP capital use requirement. The current statutory provision in the URIP law that requires municipalities use state URIP funding for capital purposes would also be repealed. The State can use Highway Fund dollars for highway maintenance (including plowing) and enforcement of traffic laws, and municipalities should have the same freedom. Of course, like the State, municipalities can only use Highway Fund dollars for eligible purposes allowed by the Maine Constitution. See Art IX, Section 19.

3. Use motor vehicle excise tax for highways. As an important acknowledgment that municipalities need to be partners with the State in our joint endeavor of taking care of our highway system, it is recommended that Maine statute provide that motor vehicle excise tax revenue collected by municipalities be used only for highway-related purposes including maintenance or capital costs of highways, minor spans, transit support, and traffic enforcement. Most people already believe their excise tax is used for highways only. The recent referendum campaign that defeated a roll back in the motor vehicle excise tax strongly stressed that notion as well. This recommendation received strong PWG support, though it was not unanimous.

Procedural Recommendations

In addition to the three major substantive recommendations set forth above, this Study makes the three procedural recommendations.

1. Limit Existing Reclassification Practices. MaineDOT would be directed to finalize, as best as possible, a detailed list of the road reclassifications that are currently being explored and implement a four year moratorium on the expansion of the reclassification list, unless the reclassification is mutually agreed to by both the municipality and MaineDOT. This will give municipalities comfort that MaineDOT will not simply change the rules of the game after it starts.

2. Create an Appeals Committee. A 5-member Appeals Committee would be created to hear and quickly decide appeals from functional classifications made by the MaineDOT Commissioner and compact border designation decisions. Membership on the Committee would include representation from the Federal Highway Administration, staff counsel for the Maine Department of Transportation, staff counsel for Maine Municipal Association, an attorney from the Attorney General's Office, and a representative of the Maine Chapter of the American Society of Civil Engineers.

3. Require Program Review Every Four Years. One of key goals of this Study is increased accountability. The long-term plan of action recommended by this Study should be periodically evaluated to determine whether goals are being achieved. Given the 12 year duration proposed for the MiCHIP program, reviews every four years appear appropriate. Review topics would include annual MiCHIP capital program production rates and costs, the effect of inflation on unit costs and local road assistance rates, the apparent durability of MiCHIP treatments, the satisfaction of municipal partners, the number of municipalities opting out of or into Compact responsibilities, the number and nature of appeals, and any recommend statutory changes. MaineDOT should be charged with conducting this review in cooperation with representatives of the Maine Municipal Association and other relevant stakeholders and reporting the results to the Transportation Committee.

Political Viability of Recommendations

If implemented, there are very significant financial and other benefits to municipalities. They include the \$482 capital investment for the MiCHIP program over the next 12 years, better Minor Collector Roads, the on-going MiCHIP Funding program starting thereafter estimated at \$10 million per year, and the proposed 58% increase in Local Road Assistance estimated at \$13 million per year. Operationally, clearer roles and accountability will lead to quicker local decisions and efficiency. Of course, there are costs too. Summer maintenance and primary capital responsibility for Minor Collector roads will return to municipalities.

As of the date of this report, the position of the Maine Municipal Association remains unclear. The last "official" action was the LPC rejection of the prior "Fix and Swap" proposal

and a “Fix and Share” counterproposal that was much more costly to the State. (Note that MMA and other stakeholders have not yet considered all the recommendations contained in this report including the ongoing MiCHIP Funding program.) There are several reasons for municipal trepidation. Many municipal officials remain wary of any policy proposal initiated at a state level, even those formulated with their extensive involvement. Some are simply looking for more State funding.

On the other hand, some non-municipal stakeholders have reasonably expressed concern that the level of funding proposed in this report is unrealistically high given State funding shortfalls, limited user benefits regarding Minor Collector roads, and higher priority needs statewide.

Whether any fiscally realistic proposal can be accepted by the municipal community remains an outstanding policy question.

7. Another Policy Alternative

In order to reach consensus on a definitive plan of action, the Study process focused and refined the recommendations outlined above. If this plan is not achievable for cost or other reasons, other policy alternatives may be relevant. In order to memorialize one such idea, it is summarized below. It was not endorsed by the PWG.

Conceived by John Melrose, a former MaineDOT Commissioner, this idea avoids the high cost and long implementation time of improvement of the Minor Collector roads and transforms local road assistance to focus on the use of each classification of road. It does not require new revenue.

This concept would include the following components.

- Transfer to municipalities as is jurisdiction over minor collector roads.
- Do not shift any existing responsibilities for major collector roads.
- Split MaineDOT's share of the Highway Fund between municipalities (18%) and the state (82%) based upon the Annual Vehicle Miles of Travel (AVMT) occurring on roads under each jurisdiction.
- Of the local share, allocate \$12,000 per center line mile for minor collectors and \$1,030 per center line mile for town ways.
- There would be no hold harmless provision and rural and urban settings would be treated the same.
- Municipalities could expend these funds for maintenance or capital improvement on whatever local or minor collector roads they prefer.

Advantages. This alternative provides communities their fair share of the Highway Fund, no more and no less, a share based upon the proportionate use and reliance motorists (users) place on the roads cared for by communities. The per mile amount provided for minor collectors is intended to cover the recurring costs of maintenance and capital for the average community. New revenues do not have to be raised to make this alternative function although new revenues would benefit communities and MaineDOT proportionately. MaineDOT can afford this approach due to reduced maintenance expenses for labor, materials and equipment as well as reduced capital expense although in recent years capital outlays for minor collectors have been negligible. This alternative is easy to understand and implement. It is also the most affordable and likely to be sustained by policy makers over time. It does not distort MaineDOT's financial and capital priorities. It treats all communities equally without different rates of reimbursement for minor collectors.

Disadvantages. Low political viability due to municipal "turn back" concerns (though perhaps no less so than the Study recommendations due to cost), continued unclear roles and lack of accountability on state aid highways, and no improvement of poor roads.

8. The Road Ahead

Looking forward, as detailed as this report may appear to be, more work remains to achieve the “game changer” vision outlined herein. Such work includes review by the LePage Administration, the Transportation Committee, further municipal education, legislative drafting, full legislative debate, and ultimately a change in state law.

Again, however, this Study has the potential to be the most fundamental change in highway policy in over 100 years. It would reshape and strengthen the partnership between the State and municipalities and to launch a new spirit of cooperation. It would achieve simplicity, accountability, fairness, efficiency, and smoother roads. Subject to policy guidance from the Governor, MaineDOT stands willing and able to coordinate this additional work, if that is the pleasure of the Committee.

LIST OF APPENDICES

Appendix A – The Legislative Directive for the Study: P.L. 2009, Chapter 413, Sec. T-1

Appendix B - Minor Collector Highway Improvement (MiCHIP) Standard

Appendix C – MiCHIP Capital Cost Estimate

Appendix D - Municipalities Meeting the Proposed Compact Definition

Appendix E – Compact Area Responsibilities

Appendix F - Ongoing MiCHIP Funding Program Calculation

Appendix G - Miles and Local Road Assistance Funding Spreadsheet
(Separate legal sized handout)

P.L. 2009, Chapter 413 (LD 333)
The Highway Fund Budget for FY10-FY11
PART T

Sec. T-1. Highway system classification simplification study. The Department of Transportation, referred to in this section as "the department," working in cooperation with representatives of the Maine Municipal Association, the Maine Chapter of the American Public Works Association, the Maine Better Transportation Association, the Associated General Contractors of Maine and the American Council of Engineering Companies of Maine shall study the current systems for classification of public highways and related responsibilities to determine whether they can or should be simplified in ways that improve customer service, improve investment decisions, apply standards appropriate to the road, leverage the ability to deliver improvements at a lower cost and generally result in the most overall benefit to the most travelers for each dollar spent.

In conducting the study the department shall analyze the following issues:

1. Whether the State and federal highway classification systems can and should be reduced to one, or otherwise simplified;
2. Whether the State should transition over time to a system as used in other states in which the State would have full year-round responsibilities, including capital responsibilities and winter and summer maintenance of certain highways and minor spans, and local governments would have full year-round responsibilities, including capital responsibilities and winter and summer maintenance of other highways and related minor spans;
3. Whether urban and rural classification systems and related responsibilities can or should be simplified to ensure that sections of highway with similar urban development patterns are treated equally with respect to capital and maintenance responsibilities. This analysis may include whether to create 2 systems of urban classification with a common definition that reflects both federal criteria and sustained density of development, regardless of population or town boundaries;
4. The design and construction standards and processes that should apply to each road classification;
5. An assessment of transition impacts, including the cost and time required to bring highways to a consistent and appropriate standard prior to the shift to full year-round responsibilities, operational estimates for both the department and local government including equipment needs and the potential assignment of existing snow removal contracts;
6. Other fiscal matters including possible adjustments to the Urban-Rural Initiative Program or other revenue sharing opportunities, possible adjustments to the Rural Road Initiative, innovative financing tools for local governments such as expanded use of the TransCap Trust Fund at the Maine Municipal Bond Bank or the state infrastructure bank and incentives for

coordinated corridor based highway improvements involving multiple municipalities and other possible regionalization incentives;

7. Whether route numbering or signs, or both, should be revised so as to improve customer service;

8. Related administrative matters, including a fair and open mechanism to request, change and appeal decisions to reclassify highways; and

9. Related issues.

Sec. T-2. Report. The Department of Transportation shall report the results of the study under section 1 to the Joint Standing Committee on Transportation by January 15, 2010. The Joint Standing Committee on Transportation is authorized to submit legislation during the Second Regular Session of the 124th Legislature.

**Minor Collector Highway Improvement Program (MiCHIP)
Design & Construction Standards**

The intent of these standards is to bring the minor collector system up to a 10 year expected life prior to turning over year round responsibilities to the municipality.

Development of the standards was done within the Standard and Cost Subcommittee of the Highway Simplification Study in 2010 using information obtained from work done by the MaineDOT on previously turned back roads in 2007, and Municipal, Industry, and State knowledge of road maintenance. The average anticipated cost of the improvements to rural minor collectors is \$65,000 per lane mile and is based on the Department's cost experience for those 2007 turned back roads adjusted to 2010 prices.

The cost for minor collectors within compact areas is broken down into three categories.

1. High-end Improvement Project Estimate - \$490,000/lane mile. For situations where “mill and fill” treatment and a complete overhaul of the drainage system are necessary to meet the 10-year expected life standard. This average cost includes a 10% engineering/design cost component.
2. Average Improvement Project Estimate - \$265,000/lane mile. For situations where “mill and fill” treatment and minor drainage system repairs are necessary to meet the 10-year expected life standard. This cost estimate includes a 5% engineering/design cost component.
3. Low-end Improvement Project Estimate - \$100,000/lane mile. For situations where only a “mill and fill” treatment is necessary to meet the 10-year expected life standard.

These costs do not include the cost associated with improving minor structures or STRUTS in deep fills.

It is expected that in 10 years some type of light capital paving would be needed with custodial maintenance required on an ongoing basis.

The intent is not the reconstruction or major rehabilitation of the roadway, but a highway improvement that would provide a smoother ride for the traveling public and for easier winter maintenance by the Municipality.

After all the minor collector roads in the municipality are improved to the 10-year standard, maintenance and capital responsibility would shift to the municipality on July 1 following the improvement and the State would take full responsibility for state aid rural Major Collector highways. The following standards would not dictate how these roads are maintained in the future, the Municipality would have the same flexibility they have now on Local Roads.

Development Process:

The Maine Department of Transportation in collaboration with the municipality will evaluate the roadway through field reviews looking at the pavement condition, required upgrades to guardrail as well as other safety devices, and needed replacement of drainage structures. Anything that was determined to have at least a 10 year life would remain. All efforts should be taken to address conflicts on a local or regional level between the local representative (i.e., manager, public works director, road commissioner, municipal officer, etc.) and the state representative (i.e., superintendent of operations, Region Engineer, Region Manager, etc.). A 5-member Appeals Committee will be created to hear appeals on the roadway evaluation, state-level road functional classification, and compact border designation decisions.

The following factors should be evaluated, unless otherwise noted, when scoping the work with the idea of trying not to exceed the current centerline per mile allocation.

1. Pavement Condition

Typical minor collectors throughout the state are ± 22 feet in paved width. The standard calls for placing 1200 tons of asphalt mix per mile, and achieving a cross slope between 2 and 8 %. To achieve the cross slope additional shim from the quarter point out might be necessary using asphalt mix or a rap material. In compact areas, the intent is to improve the full width (i.e., curb-to-curb).

2. Geometrics

a. Horizontal Alignment

The intent of this standard would be to stay on existing alignment. Additional signage, (chevrons, curve signs), might be necessary depending on the degree of curve.

b. Vertical Alignment and sight distance

If the stopping sight distance for a crest vertical curve does not meet existing design criteria and is a documented high crash location, the design should evaluate the practicality of flattening the crest vertical curve.

3. Cross Section Elements

a. Roadside Clear Zone

Clearing of roadside hazards such as boulders and trees should be done if the existing right of way allows and there can be some consistency developed through the corridor for the traveling public.

b. Ledge

The intent is not to remove ledge unless it is a documented high crash location and can be done at a reasonable cost through mechanical means and within the existing right of way.

c. *Guardrail*

Existing W beam rail should remain in place if it has a 10 year remaining service life. New guardrail should be placed in areas where there is an existing cable or an inslope of 2:1 or steeper and is a documented high crash location.

d. *Utilities*

The intent is to leave aerial utilities in place.

e. *Signage/Striping*

All signage that does not meet the latest reflectivity requirements or the MUTCD should be replaced. After the swap route signs shall continue to be replaced by the State. Striping will be provided according to the MaineDOT Policy which resides with M&O Traffic Operations.

f. *Traffic Hardware*

Flashing beacons and lighting should be looked at on a case by case basis.

g. *Right of Way*

The intent is to stay within the existing right of way. Drainage easements or work permits should be obtained when necessary. Before the road is turned over existing right of way issues with property owners should be cleared up prior to turning the road over.

h. *Sidewalks*

The intent is not to reconstruct, rehabilitate, or construct sidewalks unless required as part of a curb or drainage adjustment.

i. *Intersections*

The intent would be to modify intersections if a documented high crash location is identified. Opportunities to implement low cost modifications, such as special signage, clearing of vegetation, or the removal of obstructions will be explored.

j. *Shoulder type*

The intent is to maintain the existing shoulder type (i.e. gravel or paved).

k. *Continuity*

The continuity of travel way and shoulder widths within a corridor should be taken into consideration when looking at improvements to a specific section of roadway. This includes the possibility of reducing or increasing width on an abutting section of roadway in the future.

l. *Curbing*

For purposes of drainage, the intent is to replace, remove or reset in kind or like curb.

4. Drainage

a. *Culverts*

Culverts up to 60 inches that during the field review are considered to have less than a 10 year service life remaining, should be replaced in kind. A culvert that has a history of flooding will be reviewed for up sizing.

b. Ditching

Ditches shall be cleaned of winter sand and debris. Construction of any new ditch needed because of drainage issues should be designed to stay within the existing right of way.

c. Closed Systems

Closed drainage systems should be cleaned out, and repaired to a 10 year or greater remaining service life. A system that has a history of flooding will be reviewed for up sizing. The Department will video the system in situations where the municipality and the state disagree over the quality.

5. Major Structures

a. Minor spans

(i.e. structures between 10 and 20 feet in length), and Struts (i.e. structures between 5 and 10 feet), on minor collector roads will be improved to a 10-year remaining service life and become the responsibility of the municipalities to maintain.

b. Retaining Walls

Retaining walls will be repaired and replaces as necessary to restore 10-year expected life.

6. Miscellaneous

a. High Crash Location is defined as:

If the Critical Rate Factor (C.R.F.) is > 1.00 , it can be a potential High Crash Location (providing the location has eight (8) or more crashes in a three-year study period). $C.R.F. = \text{Actual Crash Rate} / \text{Critical Crash Rate}$.

b. Engineering/Design

A 5-10% engineering cost component may be factored into the estimated cost for improving a compact minor collector road.

The Municipality may request improvements to the roadway to be less than the following standards, which would allow reduced maintenance costs in the future.

MiCHIP Capital Cost Estimate

	Lane Miles	LM Unit Cost	Total Program Cost	
Rural lane miles	4,254	\$65,000	\$276,510,000	
Compact lane miles				
	340	\$100,000	\$34,000,000	
	318	\$265,000	\$84,270,000	
	50	\$490,000	\$24,500,000	
Compact subtotals:	708		\$142,770,000	
Program Totals:	4,962		\$419,280,000	2010 \$
	Assuming a 12 year Program, and 2.5% Inflation			
			(Millions)	Year
		1/12th =	\$34.94	1
			\$35.81	2
			\$36.71	3
		Assuming	\$37.63	4
		2.5%	\$38.57	5
		Inflation	\$39.53	6
			\$40.52	7
			\$41.53	8
			\$42.57	9
			\$43.64	10
			\$44.73	11
			\$45.84	12
		Total MiCHIP Program Cost:	\$482.02	
		with inflation		

Municipalities Meeting the Proposed Compact Definition

	Municipality	Compact Centerline Mileage	Population (2000 Census)
1	Auburn	49.2	23,203
2	Augusta	36.96	18,560
3	Bangor	56.38	31,473
4	Bar Harbor	2.76	4,820
5	Bath	15.33	9,266
6	Belfast	17	6,381
7	Biddeford	21.91	20,942
8	Brewer	15.59	8,987
9	Bridgton	3.39	4883
10	Brunswick	27.31	21,172
11	Bucksport	2.96	4,908
12	Camden	2.6	5,254
13	Cape Elizabeth	12.49	9,068
14	Caribou	13.25	8,312
15	Cumberland	3.15	7,159
16	Dover Foxcroft	5.06	4,211
17	Eliot	5.38	5,954
18	Ellsworth	8.83	6,456
19	Fairfield	4.62	6,573
20	Falmouth	24.31	10,310
21	Farmington	12.74	7,410
22	Fort Kent	5.9	4,233
23	Freeport	11.37	7,800
24	Gardiner	9.69	6,198
25	Gorham	24.08	14,141
26	Gray	5.27	6,820
27	Hampden	4.96	6,327
28	Houlton	12.69	6,476
29	Jay	3.95	4,985
30	Kennebunk	14.33	10,476
31	Kittery	23.33	9,543
32	Lewiston	56.65	35,690

33	Lincoln	4.2	5,221
34	Lisbon	10.24	9,077
35	Madawaska	2.68	4,534
36	Madison	2.5+	4,523
37	Millinocket	6.65	5,203
38	Oakland	3.56	5,959
39	Old Orchard Beach	9.99	8,856
40	Old Town	10.91	8,130
41	Orono	10	9,112
42	Pittsfield	4.6	4,214
43	Portland	69.5	64,249
44	Presque Isle	16.81	9,511
45	Rockland	12.78	7,609
46	Rumford	8.58	6,472
47	Saco	29.67	16,822
48	Sanford	25.84	20,806
49	Scarborough	36.36	16,970
50	Skowhegan	14.47	8,824
51	South Portland	39.95	23,324
52	Standish	10.74	9,285
53	Topsham	11	9,100
54	Waldoboro	3.22	4,916
55	Waterville	29.27	15,605
56	Wells	11.51	9,400
57	Westbrook	27.69	16,142
58	Wilton	3.2	4,123
59	Windham	21.69	14,904
60	Winslow	11.76	7,743
61	Winthrop	3	6,232
62	Yarmouth	12.82	8,360
63	York	17.3	12,854

Municipalities with less than 4,000 population that can opt-out			
1	Boothbay Harbor	3.08	2,334
2	Calais	4.5+	3,447
3	Dexter	3.43	3,890
4	Fryeburg	3.59	3,083
5	Greenville	2.87	1,623
6	Hallowell	4.3	2,467
7	Livermore Falls	2.6	3,228
8	Machias	3.8	2,353
9	Mexico	2.5	2,959
10	Newport	2.8	3,017
11	Ogunquit	3.35	1,226
12	Van Buren	3.62	2,631

 Current State Urban Compact
 Current State Winter Compact

Compact Area Responsibilities

Municipal Role (generally maintenance)

- Winter snow & ice control
- Pothole repair
- Pavement markings (centerline, arrows, words, symbols, crosswalks and edgeline (if any))
- Traffic Signs (regulatory, warning, and advisory)
- Ditching
- Driveway culvert cleaning, repair, and replacement
- Cross culvert cleaning, repair, and replacement
- Minor span cleaning and repair
- Catch basin and closed drainage cleaning and repair
- Traffic signal/beacon maintenance and repair
- Guardrail repair
- Erosion control and vegetation management
- Hazardous tree pruning or removal
- Retaining wall maintenance
- Sidewalk maintenance
- Dust control, street sweeping
- Curb repair and replacement
- Plus administrative local control of:
 - 1) Driveway and Entrance Permitting
 - 2) Opening Permits
 - 3) Utility Coordination (when not part of a scheduled project)

MaineDOT Role (generally capital)

- Paving on Major Collectors, Arterial Highways, Interstate and Freeways
- All Freeway and Interstate Maintenance
- Highway Reconstruction on all Arterials and Major Collectors*
- Route and destination signs
- Cross culvert and minor span replacement (prior notice has been provided by town along with adequate maintenance)
- Minor Span replacement (prior notice has been provided by town along with adequate maintenance)
- Closed drainage system reconstruction* (prior notice has been provided by town along with adequate maintenance)
- Bridge repair and replacement
- Retaining wall reconstruction* (prior notice has been provided by town along with adequate maintenance)
- Speed Limit signs on state/state aid highways when first installed or when changed due to recent DOT review
- Sidewalk construction/reconstruction*
- New signal systems hardware/software

*Notes. (1) All reconstruction activities will be subject to the MaineDOT - Local Cost Sharing Policy.
(2) Waiver of specific compact activities may be granted, perhaps with commensurate reduced reimbursement rate, if the municipality can demonstrate that it does not have the operational, administrative or financial capability to perform that activity.

Ongoing MiCHIP Funding Program Calculation

Total Lane Miles	LM per Year - One 7th of Total	\$ Per year Year 12	State 50% Share		Future Cost per LM	Year
4954	708	\$19.5	\$9.8		\$21,000	Today
				Assuming 2.5% Inflation	\$21,525	1
					\$22,063	2
					\$22,615	3
					\$23,180	4
					\$23,760	5
					\$24,354	6
					\$24,962	7
					\$25,586	8
					\$26,226	9
					\$26,882	10
					\$27,554	11
					\$28,243	12

Miles and Local Road Assistance Funding Spreadsheet

See separate legal size handout

or see

<http://www.maine.gov/mdot/hss/index.htm>